

## Abstract

$\text{SiH}_3\text{CH}_3$  having the concentration of 1 to 10% is diluted with  $\text{H}_2$  and a portion of the diluted  $\text{SiH}_3\text{CH}_3$ ,  $\text{GeH}_4$  and  $\text{SiH}_4$  (or DCS) are respectively supplied to a chamber of an epitaxial device at predetermined flow rates, and  $\text{SiGe:C}$  is formed by an epitaxial growth technique. By diluting the  $\text{SiH}_3\text{CH}_3$ , the concentration of oxygen-based impurity contained in the  $\text{SiH}_3\text{CH}_3$  is reduced and hence, the oxygen-based impurity which is supplied to a chamber are reduced whereby the concentration of oxygen-based impurity contained in the  $\text{SiGe:C}$  formed in a film is reduced.